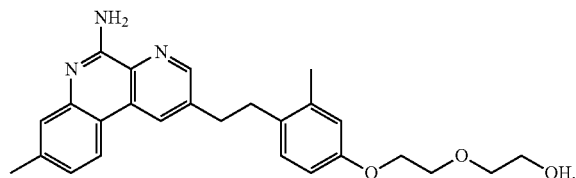


10. The method of claim 6, wherein the benzonaphthyridine TLR7 agonist is 2-(2-(4-(2-(5-amino-8-methylbenzo[f][1,7]naphthyridin-2-yl)ethyl)-3-methylphenoxy)ethoxy)ethanol having the structure of

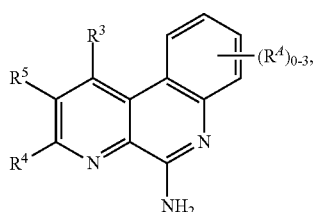


11. The method of claim 1, wherein the hemorrhagic fever virus is a Filoviridae virus.

12. The method of claim 11, wherein the Filoviridae virus is selected from the group consisting of Marburg virus and Ebola virus.

13. (canceled)

14. An immunogenic composition comprising: (a) benzonaphthyridine compound, or salt, solvate, or derivative thereof, having the structure of:



Formula (II)

wherein:

R³ is H, halogen, C₁-C₆alkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆heteroalkyl, C₁-C₆haloalkyl, C₁-C₆alkoxy, C₁-C₆haloalkoxy, aryl, heteroaryl, C₃-C₈cycloalkyl, and C₃-C₈heterocycloalkyl, wherein the C₁-C₆alkyl, C₁-C₆heteroalkyl, C₁-C₆haloalkyl, C₁-C₆alkoxy, C₁-C₆haloalkoxy, C₃-C₈cycloalkyl, or C₃-C₈heterocycloalkyl groups of R³ are each optionally substituted with 1 to 3 substituents independently selected from halogen, —CN, —R⁷, —OR⁸, —C(O)R⁸, —OC(O)R⁸, —C(O)OR⁸, —N(R⁹)₂, —C(O)N(R⁹)₂, —S(O)₂R⁸, —S(O)₂N(R⁹)₂ and —NR⁹S(O)₂R⁸;

R⁴ and R⁵ are each independently selected from H, halogen, —C(O)OR⁷, —C(O)R⁷, —C(O)N(R¹¹R¹²), —N(R¹¹R¹²), —N(R⁹)₂, —NHN(R⁹)₂, —SR⁷, —(CH₂)_nOR⁷, —(CH₂)_nR⁷, —LR⁸, —LR¹⁰, —OLR⁸, —OLR¹⁰, C₁-C₆alkyl, C₁-C₆heteroalkyl,

C₁-C₆haloalkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆alkoxy, C₁-C₆haloalkoxy, aryl, heteroaryl, C₃-C₈cycloalkyl, and C₃-C₈heterocycloalkyl, wherein the C₁-C₆alkyl, C₁-C₆heteroalkyl, C₁-C₆haloalkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆alkoxy, C₁-C₆haloalkoxy, aryl, heteroaryl, C₃-C₈cycloalkyl, and C₃-C₈heterocycloalkyl groups of R⁴ and R⁵ are each optionally substituted with 1 to 3 substituents independently selected from halogen, —CN, —NO₂, —R⁷, —OR⁸, —C(O)R⁸, —OC(O)R⁸, —C(O)OR⁸, —N(R⁹)₂, —P(O)(OR⁸)₂, —OP(O)(OR⁸)₂, —P(O)(OR¹⁰)₂, —OP(O)(OR¹⁰)₂, —C(O)N(R⁹)₂, —S(O)₂R⁸, —S(O)₂R⁸, —S(O)₂N(R⁹)₂, and —NR⁹S(O)₂R⁸;

or R³ and R⁴, or R⁴ and R⁵, when present on adjacent ring atoms, can optionally be linked together to form a 5-6 membered ring, wherein the 5-6 membered ring is optionally substituted with R⁷;

each L is independently selected from a bond, —(O(CH₂)_m)_t—, C₁-C₆alkyl, C₂-C₆alkenylene and C₂-C₆alkynylene, wherein the C₁-C₆alkyl, C₂-C₆alkenylene and C₂-C₆alkynylene of L are each optionally substituted with 1 to 4 substituents independently selected from halogen, —R⁸, —OR⁸, —N(R⁹)₂, —P(O)(OR⁸)₂, —OP(O)(OR⁸)₂, —P(O)(OR¹⁰)₂, and —OP(O)(OR¹⁰)₂;

R⁷ is selected from H, C₁-C₆alkyl, aryl, heteroaryl, C₃-C₈cycloalkyl, C₁-C₆heteroalkyl, C₁-C₆haloalkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆alkoxy, C₁-C₆haloalkoxy, and C₃-C₈heterocycloalkyl, wherein the C₁-C₆alkyl, aryl, heteroaryl, C₃-C₈cycloalkyl, C₁-C₆heteroalkyl, C₁-C₆haloalkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆alkoxy, C₁-C₆haloalkoxy, and C₃-C₈heterocycloalkyl groups of R⁷ are each optionally substituted with 1 to 3 R¹³ groups, and each R¹³ is independently selected from halogen, —CN, —LR⁹, —LOR⁹, —OLR⁹, —LR¹⁰, —LOR¹⁰, —OLR¹⁰, —LR⁸, —LOR⁸, —OLR⁸, —LSR⁸, —LSR¹⁰, —LC(O)R⁸, —OLC(O)R⁸, —LC(O)OR⁸, —LC(O)R¹⁰, —LOC(O)OR⁸, —LC(O)NR⁹R¹¹, —LC(O)NR⁹R⁸, —LN(R⁹)₂, —LNR⁹R⁸, —LNR⁹R¹⁰, —LC(O)N(R⁹)₂, —LS(O)₂R⁸, —LS(O)₂R⁸, —LC(O)NR⁹OH, —LNR⁹C(O)R⁸, —LNR⁹C(O)OR⁸, —LS(O)₂N(R⁹)₂, —OLS(O)₂N(R⁹)₂, —LNR⁹S(O)₂R⁸, —LC(O)NR⁹LN(R⁹)₂, —LP(O)(OR⁸)₂, —LOP(O)(OR⁸)₂, —LP(O)(OR¹⁰)₂ and —OLP(O)(OR¹⁰)₂;

each R⁸ is independently selected from H, —CH(R¹⁰)₂, C₁-C₈alkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆haloalkyl, C₁-C₆alkoxy, C₁-C₆heteroalkyl, C₃-C₈cycloalkyl, C₂-C₈heterocycloalkyl, C₁-C₆hydroxyalkyl and C₁-C₆haloalkoxy, wherein the C₁-C₈alkyl, C₂-C₈alkene, C₂-C₈alkyne, C₁-C₆heteroalkyl, C₁-C₆haloalkyl, C₁-C₆alkoxy, C₃-C₈cycloalkyl, C₂-C₈heterocycloalkyl, C₁-C₆hydroxyalkyl and C₁-C₆haloalkoxy groups of R⁸ are each optionally substituted with 1 to 3 substituents independently selected from —CN, R¹¹, —OR¹¹, —SR¹¹, —C(O)R¹¹, —OC(O)R¹¹, —C(O)N(R⁹)₂, —C(O)OR¹¹, —NR⁹C(O)R¹¹, —NR⁹R¹⁰, —NR¹¹R¹², —N(R⁹)₂, —OR⁹, —OR¹⁰, —C(O)NR¹¹R¹², —C(O)NR¹¹R¹², —C(O)NR¹¹OH, —S(O)₂R¹¹, —S(O)₂R¹¹, —S(O)₂NR¹¹R¹², —NR¹¹S(O)₂R¹¹, —P(O)(OR¹¹)₂, and —OP(O)(OR¹¹)₂;

each R⁹ is independently selected from H, —C(O)R⁸, —C(O)OR⁸, —C(O)R¹⁰, —C(O)OR¹⁰, —S(O)₂R¹⁰, —C₁-C₆alkyl, C₁-C₆heteroalkyl and C₃-C₆cycloalkyl,